

**CLAIMS:**

1. A particle board having wooden materials coated with an adhesive of a thermosetting resin and pressurized with being heated, the particle board comprising:

a core layer and face layers provided on both, front and back, sides of the core layer, wherein the wooden materials of the face layer are smaller in the average particle diameter than the wooden material of the core layer; and

voids between the adjacent wooden materials in the face layer and the core layer are filled with resin particles of a thermoplastic resin by being pressurized with being heated.

2. A particle board according to claim 1, wherein the average particle diameter of the resin particles in the face layers is smaller than that of the resin particles in the core layer.

3. A particle board according to claim 1, wherein the amount of the resin particles is from 10 to 50 parts by weight based on 100 parts by weight of the wooden materials in the core layer and the face layers.

4. A particle board according to claim 1, wherein the front and back surfaces of the both face layers are close adherence to plastic sheets applied by pressurization with heating.

5. A method of making a particle board comprising a

core layer and two face layers formed on both, front and back, sides of the core layer, comprising the steps of:

preparing core layer wooden materials and face layer wooden materials which are smaller in the average particle diameter than the core layer wooden materials;

applying an adhesive of a thermosetting resin to the core layer wooden materials and the face layer wooden materials;

mixing resin particles of a thermoplastic resin with the core layer wooden materials and the face layer wooden materials to yield a core layer material mixture and a face layer material mixture;

making a pile of the face layer material mixture and a pile of the core layer material mixture by turns, so as to form a semi-finished board product consisting of the core layer and the two face layers; and

pressurizing the semi-finished board product with heating, so as to melt and cause the resin particles to permeate and fill the voids between the adjacent wooden materials.

6. A method of making a particle board according to claim 5, wherein the resin particles to be mixed with the face layer wooden materials are smaller in the average particle diameter than those to be mixed with the core layer wooden materials.

7. A method of making a particle board according to

claim 5, wherein the wooden materials are waste structural woods.

8. A method of making a particle board according to claim 5, wherein the resin particles are recycled materials formed by melting by heat and shaping waste thermoplastic resin pieces.

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